DEC STD 092-0 FINISH AND COLOR STANDARD - INTRODUCTION AND GENERAL REQUIREMENTS

DOCUMENT IDENTIFIER: A-DS-EL00092-00-0 Rev H1, 28-Jul-1989

ABSTRACT: This finish and color standard is made up of six sections, each of which may stand alone as a separate standard. The finish and color standard provides a guideline and lists requirements in the following areas:

a. Introduction to Digital's finish numbering system.

b. General finish requirements.

c. Test panel information.

d. Material and material supplier selection.

e. Requirements for evaluation of samples and batch approval.

f. Environmental, physical and appearance quality test requirements and methods.

APPLICABILITY: This standard is mandatory for all organizations within Digital Equipment Corporation that produce or procure materials requiring finishes or finished surfaces.

STATUS: APPROVED 28-Jul-1989; type $ VTX SMC for expiration date.

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APPROVAL: This standard has been reviewed and recommended for approval by the Systems Materials Organization and the General Review Group for its category for use throughout Digital. Rev H1 incorporates clerical changes only.

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1 INTRODUCTION

1.1 PURPOSE

The purpose of this section is to explain the system that is used by Digital to ensure that the finish material and finished parts accepted by Digital are of the highest quality and conform to the requirements listed in each section of the standard.

1.2 SCOPE

This section of the standard describes the system and furnishes information that may be used by Digital personnel in the selection of materials, finishes, and vendors to be used in the finishing of manufactured parts.

This standard does not apply to the assignment of 92-class purchased part identifiers. For that information, refer to *DEC STD 092-1 Finish and Color Standard - Finish Standard for Applicators,* subhead 2.1 Digital Standard Finish Number.

1.3 RESPONSIBILITIES

1.3.1 Finish Applicator

The finish applicator is responsible for supplying a product that meets the requirements of DEC STD 092-1, and the appropriate finish specification.

1.3.2 Coating Material Supplier

The coating material supplier is responsible for the following:

a. Providing test panels and material samples to Digital as required in *DEC STD 092-2 Finish and Color Standard - Finish Material Standard for Suppliers,* when requested by Digital.

b. Supplying material that meets the requirements of DEC STD 092-2.

1.3.3 Digital Materials Research Lab

The Digital Materials Research Lab is required to provide the standard color and texture panel to be used to match the finish desired by Digital.

The Lab shall receive, and perform acceptance testing on, the panels and material sample supplied by the supplier, when requested by Digital.

The Lab group shall notify the supplier of acceptance or rejection of the material or finish.

The Lab shall be responsible for testing and approval of a pre-shipment sample of finish material from the supplier before its use by in-house processors or vendor-applicators.

2 GENERAL REQUIREMENTS

2.1 STANDARD SECTIONS

DEC STD 092 is a finish and color standard made up of eight separate sections.

The standard is designed to be used either in its entirety by Digital personnel or in certain separate sections by Digital vendors. See Table 1, Purpose and Use of Each DEC STD 092 Section and Separate Specification.

EL-00092-01 - Finish Standard For Applicators

This document is directed at finish applicators, either in-house or outside vendors, and defines the Digital finish numbering system, finish requirements, and the method of handling finished parts.

EL-00092-02 - Finish Material Standard For Suppliers

This document provides information for the material supplier and covers material requirements, material tests, shipping requirements, and procedures for handling samples and test panels.

EL-00092-03 - Finish Material Test Requirements

This document is the test requirements section. It defines the test requirements and test methods applied to the finishes used on Digital parts. This document is to be used with DEC STD 092-1, and DEC STD 092-2.

EL-00092-04 - Approved Finish Specifications

This document lists the currently approved finish specifications. These specifications were originally part of DEC STD 092, but are now separate documents to facilitate distribution. They are separated into the following categories:

a. Paint

b. Metal Plating

c. Conversion and Oxide Coating

d. Molded Plastics

Requirements applicable to the specific finish are listed in each finish specification.

A copy of the applicable finish specification shall be supplied to the finish applicator or material supplier, as needed.

EL-00092-05 - Digital Color List

This document contains the list of Digital's currently-approved colors and their identification numbers.

EL-00092-06 - Digital-Approved Paint Suppliers

This document correlates Digital's paint identification number with the supplier's paint identification number for all Digital-approved paints.

EL-00092-07 - Plastic Color Control

This document lists all color-impregnated plastics that have been approved for use by Digital.

Table 1: Purpose and Use of Each DEC STD 092 Section and Separate Specification

DEC STD 092		EXPECTED USERS		
Section	Subject	Applicators (Vendor or In-House)	Material Suppliers	Digital* Designers
0	Introduction and General Requirements	No	No	Yes
1	Finish Standard for Applicators	Yes	No	Yes
2	Finish Material Standard for Suppliers	No	Yes	Yes
3	Finish Material Test Requirements	Yes	Yes	Yes
4	Approved Finish Specifications	Yes	N/A	Yes
	Separate Finish Specifications	Yes	N/A	Yes
5	Digital Color List	Yes	No	Yes
6	Approved Paint Suppliers	No	No	Yes
	Separate Paint Supplier Specifications	Yes	No	Yes
7	Color-Impregnated Plastics	N/A	No	Yes

* and other Digital employees with a need-to-know.

2.2 DESIGN INFORMATION

2.2.1 General Requirements for All Digital Finishes

Finishes approved for use on Digital products shall provide surface protection when subjected to the specific types of environmental conditions described in *DEC STD 092-3 Finish Material Test Requirements*.

These environmental capabilities are similar to Type II conditions encountered by "Sheltered Surfaces" as defined in *MIL-F-14072*.

Type II Sheltered Surfaces are those not totally exposed to the direct action of climatic elements when the equipment is operating on site or in transit. These surfaces will receive direct exposure to temperature, humidity, and normal industrial atmospheres, including concentrations of corrosive vapors up to toxic limits, as defined by the American Conference of Government Industrial Hygienists *Industrial Ventilation, A Manual of Recommended Practice*.

Exposure to direct chemical spillage will be limited to non-abrasive cleaners and solvents such as turpentine, naptha, and ethyl and butyl alcohols.

Type II Sheltered Surfaces are not subjected to direct exposure to rain, hail, snow, sleet, salt laden air, direct solar radiation, or the scouring action of windblown sand. Should environmental exposure to the direct action of these elements be required, the project engineer is responsible for the specification and subsequent performance adequacy of the specified finish.

The environmental, physical, and appearance quality tests identified in DEC STD 092-3, are used solely as benchmark performance indicators and do not reflect any intended or implied environmental capabilities for a finished Digital product. The parameters used provide accelerated test results so that evaluation of material performance can be obtained more rapidly.

The appropriate tests and criteria described in DEC STD 092-3, for the specific finishes and substrate will be applied to sample 4-inch x 6-inch (101 mm X 152 mm) test panels in order to either evaluate a currently approved process or finish, or to evaluate and approve a new process or finish. Test panel requirements and uses are described in DEC STD 092-1.

2.2.2 Environmental Tests on Samples of Finished Digital Parts

Testing of finished Digital parts may be required to provide random checks on the finishing process and materials. In addition, complex or intricate Digital parts may be tested to determine the adequacy of the specified finish.

The environmental tests performed on samples of finished Digital parts, whether finished in-house or by outside vendors, will be limited to the following:

a. Two complete cycles of non-operating temperature/humidity test as specified in *DEC STD 102-1 Environmental Standard for Computers and Peripherals - Temperature, Humidity, and Altitude Test Requirements.*

b. The sample Digital part will be an individual finished piece only and this test will not be performed on any subassembly, assembly, or finished Digital product.

c. Acceptance criteria are the same as applied to test panels, in that sharp edges or corners may exhibit local rusting.

d. Environmental tests for assemblies or finished Digital products are listed in DEC STD 102-1.

APPENDIX A

REFERENCED DOCUMENTS

A.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00092-01	*DEC STD 092-1 Finish and Color Standard - Finish Standard for Applicators*
EL-00092-02	*DEC STD 092-2 Finish and Color Standard - Finish Material Standard for Suppliers*
EL-00092-03	*DEC STD 092-3 Finish Material Test Requirements*
EL-00102-01	*DEC STD 102-1 Environmental Standard for Computers and Peripherals - Temperature, Humidity, and Altitude Test Requirements*

Copies of Digital EL-Class documents may be obtained from Standards and Methods Control, NRO4/D4, DTN: 287-3724, JOKUR::SMC, or via VTX SMC.

Please provide your name, mailstop, cost center, badge number, and node address when ordering.

A.2 Government Specification

Specification Number	Document Title
MIL-F-14072	*Finishes for Ground Signal Equipment*

A.3 Publication

	Document Title
	Industrial Ventilation, A Manual of Recommended Practice

Copies can be obtained from the Committee on Industrial Ventilation, Box 16153, Lansing, MI 48901.

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